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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,062	12/27/2001	Josef Froehler	449122020000	1767

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MORRISON & FOERSTER LLP
1650 TYSONS BOULEVARD
SUITE 300
MCLEAN, VA 22102

EXAMINER

ELALLAM, AHMED

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

5/

Office Action Summary	Application No. 10/019,062	Applicant(s) FROEHLER ET AL.	
	Examiner AHMED ELALLAM	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is responsive to RCE filed on 09/01/2006.

Claims 1-22 are pending.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “recorder” and “transmitter” must be shown or the feature(s) canceled from claims 19 and 22, the “modification means” must be shown or the feature(s) canceled from claim 20 and the “recorder” must be shown or the feature(s) canceled from claim 21. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 3 objected to because of the following informalities:

In claim 3, the claimed "the reduced resource element" lacks antecedent basis.

In claim 4, line 2, the claimed "the respective allocated transmission resource element" lacks antecedent basis.

In claim 7, line 6, the claimed "the decentralized communications devices" lacks antecedent basis.

In claim 19, line 17, the phrase "the transmission resource elements" lacks antecedent basis.

In claim 20, line 4, the claimed "the reduced resource element" lacks antecedent basis.

In claim 21, line 3, the claimed "the allocated reduced resource element" lacks antecedent basis.

In claim 22, line 11, the claimed "the transmission resource elements" lacks antecedent basis.

Other lack of antecedent basis for other claimed elements may remain unnoticed. Applicants are required to provide the appropriate correction.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 1, the specification doesn't adequately describe the limitation "allocating a partial transmission resource" and "the at least partially reducing the partial transmission resources allocated to the peripheral devices". The specification doesn't describe what are the "partial transmission resources" or what are the "transmission resources", nor give an example of a "partial transmission resource". The specification refers to a connection(s) routed via a transmission resource element(s), see page 6, lines 32-34, and page 7, lines 33-34. these transmission resources are understood to be the (tpr1, tpr2, and tpr3) of figure 2, thus the transmission resources or the partial transmission resource are understood to correspond to these elements and since the specification doesn't describe the structure of these elements and how they operate, the corresponding claimed features are not enabled.

Regarding claim 19, the specification doesn't adequately describe the features of "allocating a partial transmission resource", "the transmission resource elements which are allocated to the peripheral communications devices are partially reduced" and "modifying or retaining the extent of each reduced partial transmission resources allocated to each peripheral communication device depending on the quality". The specification doesn't describe or give an example of the partial transmission resource or the transmission resource and what these resources are and how they operate.

Regarding claim 4, the specification does not adequately describe the feature of "the allocated transmission element is modified". In particular, the specification doesn't describe the nature of the modification given the structural nature of a transmission resources. (See claims 1 and 19 above).

Claims 2-18, and 20-21 depend from respective independent claims 1 and 19 thus they are subject to the same rejection.

Regarding claim 22, the specification doesn't adequately describe the claimed features of "allocating a partial transmission resource", "the transmission resource elements which are allocated to the peripheral communication devices are at least partially reduced" for similar reasons as indicated above with regard to claims 1 and 19.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is not clear what is meant by “allocating a partial transmission resource”, “at least partially reducing the partial transmission resources”. In particular, it is not clear what is meant by “partial transmission resource” and “partially reducing the partial transmission resource”. Moreover, the transmission resource elements are understood from the specification to mean structural elements (see rejections 112 1st above) and reducing in this context of “structural element” is vague and makes no sense. Similar remarks apply to the claimed “modifying or retaining the extent of each reduced partial transmission resources allocated to each peripheral communication device depending on the quality”, the meaning “the extent of each reduced transmission resource element which is allocated to a decentralized communication device is modified or retained as a function of the quality” is vague and indefinite.

Regarding claim 3, the phrase “the reduced resource element allocated to a peripheral communication device” lack antecedent basis. The phrase “the extent of the allocated, reduced, transmission resource element is increased” is vague and indefinite.

Regarding claim 4, the phrase “the allocated transmission resource element” lack antecedent basis.

In claim 7, the phrase “the central communication device the transmitted recording” makes no sense.

In claim 16, the phrase "each peripheral communication device" makes no sense in the context of the claim as a whole.

Regarding claim 22, in addition to similar remarks as in claim 1, it is not clear what is meant by the phrase "the control unit can modify the extent of the reduced transmission resource element which is allocated to each decentralized communications device is modified or retained as a function of the recording results". The extent is modified or retained is vague and indefinite. Also in the preamble it is recited "An access control device having a central and several communications devices", such phrase is confusing given a device having a plurality of devices.

Claims 2-22 suffer from similar deficiencies as indicated in claim 1, thus they are subject to the same rejections.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 19 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Ghaibeh et al, US 5,926,478. Hereinafter referred to as Ghaibeh.

Regarding claim 1, with reference to figures 1, 10, 10A and 11, Ghaibeh discloses a method for matching transmission resources between head-end 22 (figure 1) (claimed central communication device) and a number of network units (NUs) 26 (claimed peripheral communication devices), the headend allocates upstream time slots

to each network unit as function of the state of the connection that is routed via the respective allocated time slots (permits), see column 6, lines 60-68, and column 7, lines 1-10. (Examiner interpreted the claimed transmission resource of being timeslots) (Claimed process of the adaptation transmission resources between a central and several peripheral communications devices comprising allocating a partial transmission resource by the central communication device to each of the peripheral devices, depending on the quality and/or transmission properties of at least one connection conducted over a respective partial transmission resource such that guaranteed transmission capacities of the at least one connection can be maintained),

Ghaibeh further discloses allocating the permits (time slots) to NUs comprises VBR, ABR and CBR permits, and wherein each NU having at least one ATM cell in a respective VBR, ABR and CBR is given an equal allocation of the available upstream bandwidth for a respective service priority, see column 10, lines 60-67 and column 11, lines 1-12. Ghaibeh further discloses taking account of CDV (cell delay variation) in the provisioning of permits, see column 11, lines 27-44. (Examiner interpreted the allocation of time slots (dynamic allocation) to each NUs by the Headend in accordance with the class of traffic (CBR VBR...etc) (claimed quality) , and the tolerance level (claimed properties) of the connection type of each NU as being the claimed at least partially reducing the partial transmission resources allocated to the peripheral communication devices such that the guaranteed transmission capacities of the at least one connection are provided in part, and modifying or retaining the extent of each reduced partial

transmission resources allocated to each peripheral communication device depending on the quality).

Regarding claims 2 and 3, Ghaibeh discloses the permits are determined based on the demand for bandwidth, wherein the bandwidth is dynamically and adaptively granted among NUs. See column 1, lines 61-67, column 10, lines 47-67, and column 11, lines 1-11.

Regarding claim 19 (as best understood), with reference to figures 1, 10, 10A and 11, Ghaibeh discloses a communication arrangement having a headend 22 (figure 1) (claimed central communication device) and a number of network units (NUs) 26 (claimed peripheral communication devices), the headend allocates upstream time slots to each network unit as function of the state of the connection that is routed via the respective allocated time slots (permits) using fiber network (24, 25, figure 1) (the fiber network is interpreted of being the claimed transmission medium arranged between the central and the peripheral communication devices and have a transmission resource) , see column 6, lines 60-68, and column 7, lines 1-10.. The headend comprises a HEMAC (Headend media access controller) (claimed control unit (MAC) arranged in the central communications device) for providing permit (time slot allocation) as a function of requested ATM service connections. (Examiner interpreted the claimed transmission resource element(s) of being timeslots as described in the specification (spec, page18, lines 34-35)).

Ghaibeh further discloses allocating the permits (time slots) to NUs comprises VBR, ABR and CBR permits, and wherein each NU having at least one ATM cell in a

respective VBR, ABR and CBR is given an equal allocation of the available upstream bandwidth for a respective service priority, see column 10, lines 60-67 and column 11, lines 1-12. Ghaibeh further discloses taking account of CDV (cell delay variation) in the provisioning of permits, see column 11, lines 27-44, wherein NU transmits a request information which contains a status count of the number of ATM cells awaiting upstream transmission, and receiving by the headend updated ATM cell queue information from a group of NUs, see column 2, lines 51-67 and column 3, lines 1-7. (Examiner interpreted the allocation of time slots (dynamic allocation) to each NUs by the HEMAC in accordance with the class of traffic (CBR VBR...etc) (claimed quality) , and the tolerance level (claimed transmission properties) of the connection type of each NU as being the claimed transmission resource elements allocated to the peripheral communication devices are partially reduced, and the NU transmitting a request information which contains a status count of the number of ATM cells awaiting upstream transmission as being the claimed "recorder for recording the quality and or the transmission characteristics of the at least one connection for transmitting the recording result to the central communication device) (Note: a transmitter is inherent to Ghaibeh, because that is needed for the transmission of the request), (Examiner interpreted the allocation of time slots to the NUs (permits) by the HEMAC in accordance with the received ATM cell queue information received from the NUs group as being the claimed control unit can modify the extent of the reduced transmission resource element which is allocated to each decentralized communication device as a function of the recording results).

Regarding claim 21, as indicated above with reference to base claim 20, Ghaibeh discloses the connection being ATM connection such as CBR , ABR, VBR,..., (claimed at least one connection which is routed via the allocated transmission resource element is implemented using Asynchronous Transfer Mode ATM, with the ATM connection being configured with an ATM service class defined by the ATM forum, which in each case specifies the quality and the transmission characteristics of the ATM connection);

receiving by the headend updated ATM cell queue information from a group of NUs, using counters (means for recording) for monitoring the CBR, ABR and VBR service queues filling level, see column 2, lines 51-67, column 3, lines 1-7, column 9, lines 58-67 and column 10, lines 1-11. (Claimed at least one queue is provided in each decentralized communication device for temporary storage of the information to be transmitted in the at least one ATM connection, and each decentralized communications device has filling level recording means for recording the current queue filling level of the at least one queue and transmitting the recording result to the control unit which is arranged in the central communication device);

Ghaibeh further discloses taking account of CDV (cell delay variation) in granting the permit (TDM slot) on dynamic fashion for different class of traffic, and based on the received queue level in each NU request, see, column 2, lines 51-67, column 3, lines 1-7, column 11, lines 27-44, column 10, lines 47-67, and column 11, lines 1-11. (Examiner interpreted the dynamic slot allocation of Ghaibeh based on received queues level for each class of traffic information (CBR ...VBR) from each NU as being the claimed

quality and the transmission characteristics of the respective ATM connections are determined by assessing the transmitted recording results, and the transmission results, and the transmission resource elements which are allocated to the decentralized communication devices are modified as a function of the quality and the transmission characteristics).

Response to Arguments

6. Applicant's arguments filed 9/01/2006 have been fully considered but they are not persuasive.

Drawings:

Applicants stated that "There is no requirement that every feature of the claimed invention be illustrated. This would be unduly burdensome to Application. Rather, only essential features necessary to understand the invention must be illustrated. In this case, the recorder and transmitter are essential features, and amendment to the drawings are not necessary at this time". Emphasis added.

Examiner notes that the recorder and the transmitter are essential features claimed. And thus they are needed to be shown in the corresponding figures. The objection to the Drawing is maintained as proper.

Claim Rejections under 35 USC § 112:

Applicants amended claims 1, 19 and 22 to overcome the 112 1st and 2nd paragraph rejections. However remaining issues are unresolved as indicated above.

However Applicants didn't properly address Examiner 112 1st paragraph rejections. In particular, Applicant didn't respond to the nature of the communication resources in the claims.

Applicants indicated that support of the amendment is on page 14, lines 14-31 of the specification. In response the passage Applicant relied upon doesn't describe the claimed feature of the reduction of the transmission resources or element(s). As indicated above the specification refers to a transmission resource element of assumingly being a structural element (connection(s) routed via a transmission resource element(s), see page 6, lines 32-34, and page 7, lines 33-34), in other instances the same resource element is reduced as in pending claims 1, 13 and 19, increased as in claim 11, or modified as in claim 1, 4, 8 19 and 22. The specification doesn't describe or give an example of what is being reduced, modified or increased other than the "transmission resource(s) or element(s)". Examiner indicated in the final office action that *"In the prior art system, usually it is the bandwidth that is allocated and the increase decrease or modification takes effect on the number of time slots allocated to a connection or group of connections based on the bandwidth demand and the nature of the connection(s) requested, it is within this context that the Examiner found a lack of description in the specification as originally filed. Moreover, claim 17 recites that "the transmission resource elements which are allocated to the decentralized communication device are **time-division-multiplex-oriented**", however, the specification fails short of relating between this time-division-multiplex-orientation and the reduction modification and increase of the transmission resource element"*. Emphasis added.

Art rejections:

Applicants argue on page 11 and 12 that *"Ghaibeh fails to disclose reduction of allocated partial transmission resources in such a manner that guaranteed transmission capacities of at least the one connection are provided in part, as required by the claimed invention (as amended).*

Examiner respectfully disagrees, the transmission resources are given the broadest reasonable interpretation of being time slots. Given this interpretation, Examiner believes that Ghaibeh does teach the reduction of allocated partial transmission resources in such a manner that guaranteed transmission capacities of at least the one connection are provided in part as indicated in the rejection above.

Given the lack of adequate description of the communication resources, rendered the claims unsearchable.

Applicants are kindly requested to explain and or give evidence to clarify the meaning of the transmission resource(s) and corresponding element(s) so that a proper search can be made.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, To Doris can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A. ELALLAM
Examiner
Art Unit 2616
October 2, 2006

A handwritten signature in black ink, appearing to read 'Doris H. To', with a stylized flourish at the end.

DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600